

Water-Data Report 2008

06478000 JAMES RIVER NEAR MITCHELL, SD

James Basin
Lower James Subbasin

LOCATION.--Lat 43°39'32", long 97°55'08" referenced to North American Datum of 1927, in NW ¼ NE ¼ NW ¼ sec.9, T.102 N., R.59 W., Hanson County, SD, Hydrologic Unit 10160011, on right bank at downstream side of bridge on county road, 6.5 mi southeast of Mitchell, 6.9 mi downstream of Firesteel Creek, and 2.3 mi upstream of Enemy Creek.

DRAINAGE AREA.--19,100 mi² of which 4,148 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1953 to September 1958 (published as "near Alexandria") and August 1965 to September 1972. Miscellaneous peak discharge measurement in 1995, partial-record crest-stage gage in 1997, and miscellaneous discharge measurements in 2001. October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,217 ft above NGVD of 1929, from topographic map. Miscellaneous discharge measurements made in 2001 at present site and datum. Miscellaneous discharge measurements made in 1995 and 1997 at datum 1,197.93 ft above NGVD of 1929 at site 7.2 mi upstream (SD Hwy 38). August 1965 to September 1972 at datum 1,198.00 ft above NGVD of 1929 (South Dakota Department of Transportation bench mark) at site 6.7 mi upstream (Interstate I-90), and was nonrecording gage Aug. 17 to Dec. 7, 1965. July 1953 to September 1958 nonrecording gage at datum 1,195.03 ft above NGVD of 1929 at site 3.8 mi downstream.

REMARKS.--Gage height records good. Mean daily discharges fair. Only daily discharges above 500 ft³/s published because flows less than 500 ft³/s are unreliable due to wind effect. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, since 1973. Satellite data-collection platform at station. Water temperature and specific conductance are measured with each discharge measurement.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s, Apr. 7, 1997, gage height, 23.14 ft, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge at current site, 24,700 ft³/s, Apr. 11, 2001, from rating curve extended above 20,100 ft³/s, gage height, 25.33 ft, from high-water mark.

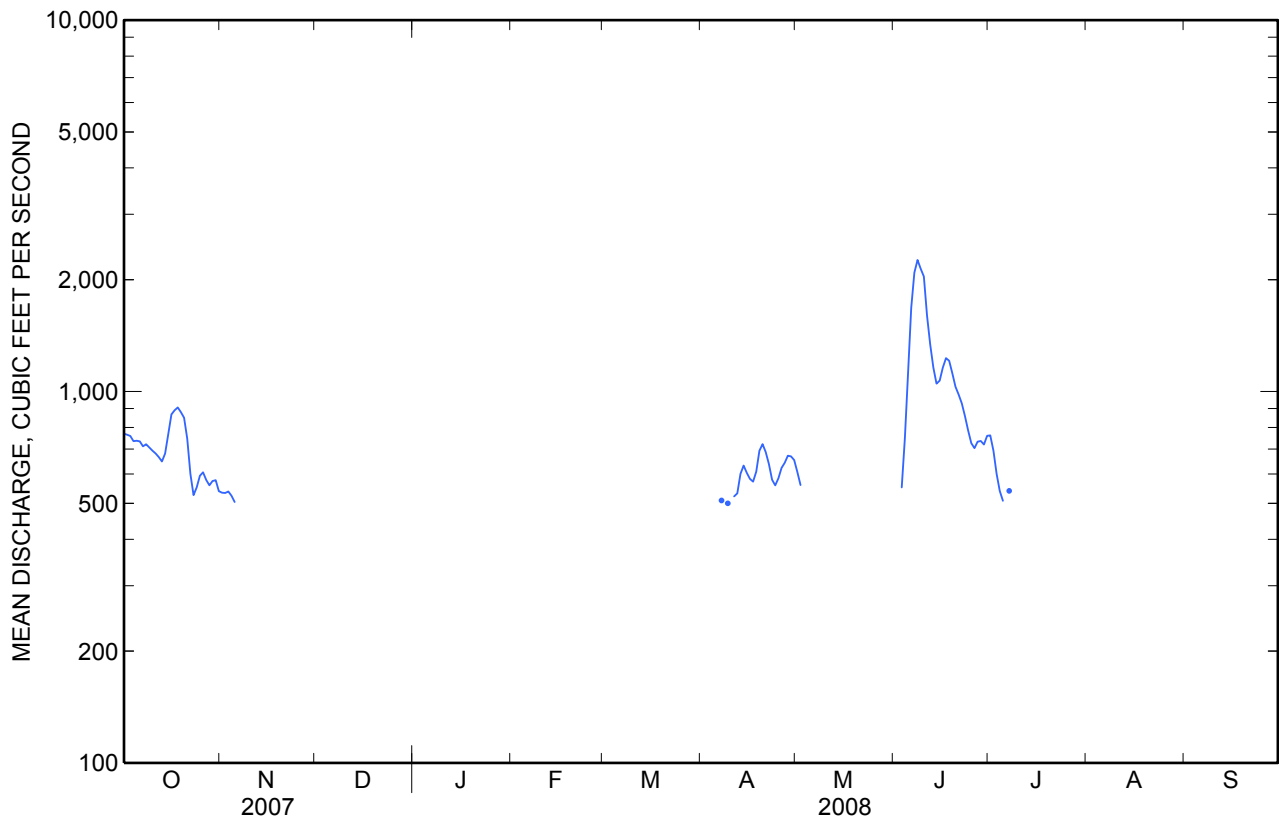
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft³/s, June 8, gage height, 17.44 ft, backwater.

06478000 JAMES RIVER NEAR MITCHELL, SD—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	770	534	---	---	---	---	---	607	---	762	---	---
2	765	533	---	---	---	---	---	560	---	693	---	---
3	759	538	---	---	---	---	---	---	552	601	---	---
4	735	524	---	---	---	---	---	---	749	540	---	---
5	737	504	---	---	---	---	---	---	1,120	508	---	---
6	734	---	---	---	---	---	---	---	1,680	---	---	---
7	712	---	---	---	---	---	509	---	2,090	540	---	---
8	721	---	---	---	---	---	---	---	2,260	---	---	---
9	707	---	---	---	---	---	500	---	2,140	---	---	---
10	693	---	---	---	---	---	---	---	2,040	---	---	---
11	681	---	---	---	---	---	522	---	1,600	---	---	---
12	666	---	---	---	---	---	532	---	1,340	---	---	---
13	648	---	---	---	---	---	600	---	1,160	---	---	---
14	681	---	---	---	---	---	632	---	1,050	---	---	---
15	768	---	---	---	---	---	604	---	1,070	---	---	---
16	868	---	---	---	---	---	582	---	1,160	---	---	---
17	890	---	---	---	---	---	572	---	1,230	---	---	---
18	906	---	---	---	---	---	609	---	1,210	---	---	---
19	880	---	---	---	---	---	693	---	1,120	---	---	---
20	850	---	---	---	---	---	722	---	1,030	---	---	---
21	747	---	---	---	---	---	687	---	981	---	---	---
22	600	---	---	---	---	---	638	---	929	---	---	---
23	526	---	---	---	---	---	579	---	858	---	---	---
24	552	---	---	---	---	---	559	---	785	---	---	---
25	593	---	---	---	---	---	584	---	726	---	---	---
26	606	---	---	---	---	---	623	---	704	---	---	---
27	578	---	---	---	---	---	643	---	733	---	---	---
28	559	---	---	---	---	---	672	---	736	---	---	---
29	574	---	---	---	---	---	669	---	720	---	---	---
30	577	---	---	---	---	---	654	---	760	---	---	---
31	539	---	---	---	---	---	---	---	---	---	---	---
Total	21,622	---	---	---	---	---	---	---	---	---	---	---
Mean	697	---	---	---	---	---	---	---	---	---	---	---
Max	906	---	---	---	---	---	---	---	---	---	---	---
Min	526	---	---	---	---	---	---	---	---	---	---	---
Ac-ft	42,890	---	---	---	---	---	---	---	---	---	---	---

06478000 JAMES RIVER NEAR MITCHELL, SD—Continued

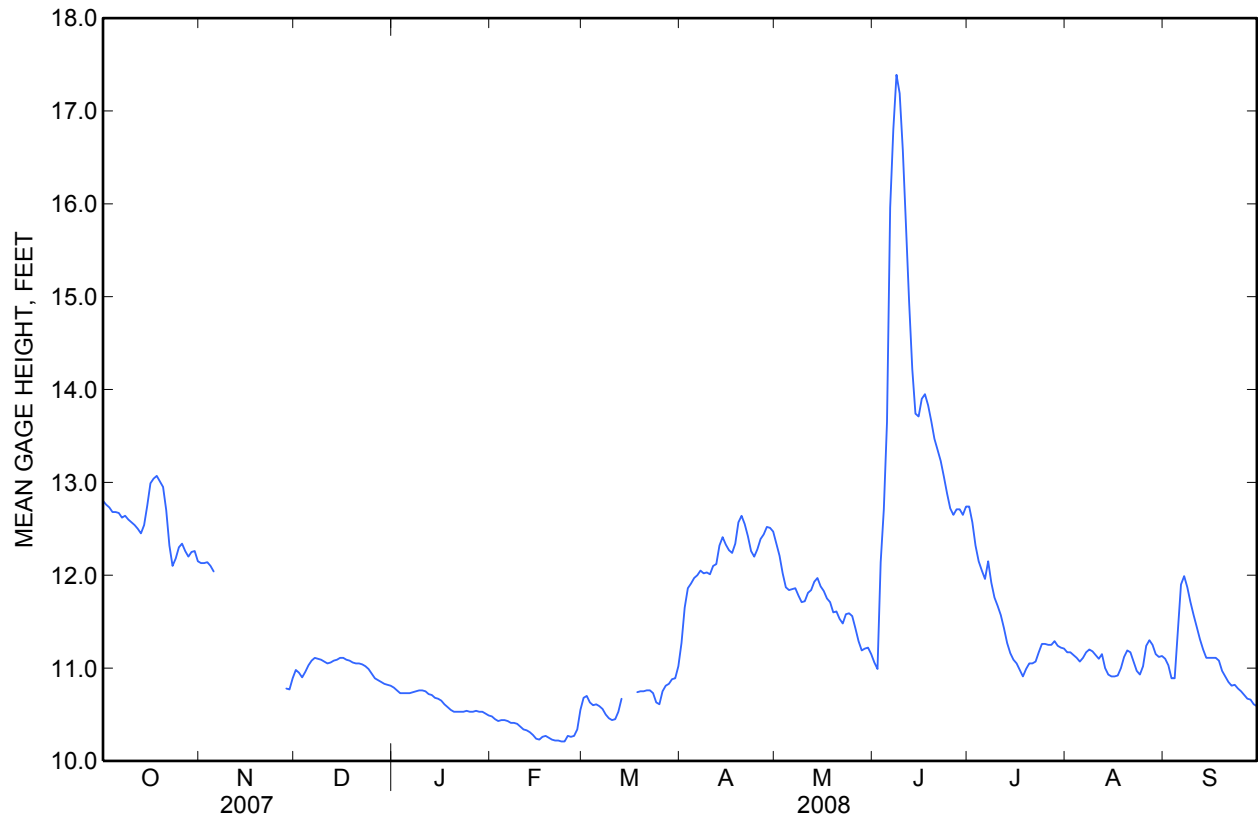


06478000 JAMES RIVER NEAR MITCHELL, SD—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12.80	12.13	10.98	10.79	10.48	10.68	11.27	12.34	11.06	12.74	11.17	11.10
2	12.76	12.13	10.95	10.76	10.45	10.70	11.65	12.21	10.99	12.57	11.17	11.03
3	12.73	12.14	10.90	10.73	10.43	10.63	11.86	12.02	12.14	12.32	11.14	10.89
4	12.68	12.10	10.96	10.73	10.44	10.60	11.91	11.87	12.71	12.15	11.11	10.89
5	12.68	12.04	11.03	10.73	10.44	10.61	11.97	11.84	13.65	12.05	11.07	11.40
6	12.67	---	11.08	10.73	10.43	10.59	12.00	11.85	15.96	11.96	11.11	11.90
7	12.62	---	11.11	10.74	10.41	10.56	12.05	11.86	16.80	12.15	11.17	11.99
8	12.64	---	11.10	10.75	10.41	10.50	12.02	11.78	17.39	11.92	11.20	11.87
9	12.60	---	11.09	10.76	10.40	10.46	12.03	11.71	17.19	11.76	11.18	11.71
10	12.57	---	11.07	10.76	10.37	10.44	12.01	11.72	16.58	11.67	11.14	11.57
11	12.54	---	11.05	10.75	10.34	10.45	12.10	11.81	15.77	11.57	11.10	11.44
12	12.50	---	11.06	10.72	10.33	10.53	12.12	11.84	14.94	11.43	11.15	11.31
13	12.45	---	11.08	10.71	10.31	10.67	12.32	11.93	14.22	11.27	11.00	11.20
14	12.54	---	11.09	10.68	10.28	---	12.41	11.97	13.74	11.16	10.93	11.11
15	12.75	---	11.11	10.67	10.24	---	12.33	11.88	13.71	11.09	10.91	11.11
16	12.99	---	11.11	10.65	10.23	---	12.27	11.83	13.90	11.05	10.91	11.11
17	13.04	---	11.09	10.61	10.26	---	12.24	11.75	13.95	10.98	10.92	11.11
18	13.07	---	11.08	10.58	10.27	10.74	12.34	11.71	13.83	10.91	11.00	11.08
19	13.01	---	11.06	10.55	10.25	10.75	12.57	11.60	13.66	10.99	11.12	10.97
20	12.95	---	11.05	10.53	10.23	10.75	12.64	11.61	13.47	11.05	11.19	10.91
21	12.70	---	11.05	10.53	10.22	10.76	12.55	11.53	13.35	11.05	11.17	10.85
22	12.32	---	11.04	10.53	10.22	10.76	12.42	11.48	13.23	11.07	11.07	10.81
23	12.10	---	11.02	10.53	10.21	10.73	12.26	11.58	13.06	11.17	10.97	10.82
24	12.18	---	10.99	10.54	10.21	10.63	12.20	11.59	12.88	11.26	10.93	10.78
25	12.30	---	10.94	10.53	10.27	10.61	12.28	11.56	12.72	11.26	11.02	10.75
26	12.34	---	10.89	10.53	10.26	10.75	12.39	11.43	12.65	11.25	11.24	10.71
27	12.26	---	10.87	10.54	10.27	10.81	12.44	11.29	12.71	11.25	11.30	10.67
28	12.20	10.78	10.85	10.53	10.34	10.83	12.52	11.19	12.71	11.29	11.25	10.66
29	12.25	10.77	10.83	10.53	10.55	10.88	12.51	11.21	12.65	11.24	11.15	10.61
30	12.26	10.89	10.82	10.51	---	10.89	12.47	11.22	12.74	11.22	11.12	10.59
31	12.15	---	10.81	10.49	---	11.02	---	11.15	---	11.21	11.13	---
Mean	12.57	---	11.01	10.64	10.33	---	12.21	11.69	13.81	11.49	11.10	11.10
Max	13.07	---	11.11	10.79	10.55	---	12.64	12.34	17.39	12.74	11.30	11.99
Min	12.10	---	10.81	10.49	10.21	---	11.27	11.15	10.99	10.91	10.91	10.59

06478000 JAMES RIVER NEAR MITCHELL, SD—Continued



06478000 JAMES RIVER NEAR MITCHELL, SD—Continued**WATER-QUALITY RECORDS**
WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Date	Time	Specific			
		Instantaneous discharge, cfs (00061)	conductance, wat unf μ S/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
Oct					
02...	0915	759	1,260	12.5	17.0
Jun					
06...	1845	1,940	1,140	25.0	19.0
13...	1315	1,160	1,490	23.0	20.5
18...	1245	1,320	1,640	27.0	26.0
30...	1725	743	1,640	27.0	24.5
Aug					
14...	1300	318	1,530	28.0	26.0